

THE FIRST ISOMORPHISM THEOREM OF LIE GROUP FOR FUZZY TOPOGRAPHIC TOPOLOGICAL MAPPING

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To my beloved mother, father and family.

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ABSTRACT

Fuzzy Topographic Topological Mapping (short FTTM), is a method that was successfully developed to solve the neuromagnetic inverse problem. The method has been developed successfully by using some of algebraic and topological structures. Furthermore, FTTM was evolved as Lie groups for its components, where all components of FTTM 1 and FTTM 2 were shown as 2- dimensional Lie group. The main purpose of this study is to develop the First Isomorphism Theorem of Lie Group for FTTM and also interpret the physical meaning of the First Isomorphism Theorem of Lie Group for Fuzzy Topographic Topological Mapping.

ABSTRAK

Pemetaan Topologi Topografi Kabur (FTTM) merupakan suatu kaedah yang telah berjaya dibangunkan bagi menyelesaikan masalah songsang neuromagnetik menggunakan beberapa struktur aljabar dan topologi. Tambahan lagi, FTTM telah berkembang sebagai kumpulan Lie bagi komponennya, di mana semua komponen FTTM 1 dan FTTM 2 telah ditunjukkan sebagai kumpulan Lie dua dimensi. Tujuan utama kajian ini ialah untuk membangunkan Teorem Isomorfisma Pertama Kumpulan Lie untuk FTTM dan juga untuk mentafsirkan maksud fizikal bagi Teorem Isomorfisma Pertama Kumpulan Lie untuk Pemetaan Topologi Topografi Kabur.